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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,354

03/18/2004

Gang Sun

18062G-006110US

9233

20350 7590 01/17/2007  
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EXAMINER

YOON, TAE H

ART UNIT

PAPER NUMBER

1714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/804,354

Applicant(s)

SUN ET AL

Examiner

Tae H. Yoon

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lim et al (US 5,891,200).

Lim et al teach that the instant anthraquinone compound is known in the art at col. 2, lines 37-50. Thus, the invention lacks novelty.

Claims 1-5, 7, 8, 19-22 and 25-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,546,258).

Kalopissis et al teach that the instant anthraquinone compound and its use in dyeing keratinic fibers at col. 1, line 28 to col. 2, line 47, and said keratinic fibers meet the instant textile. Use of a wetting agent in an aqueous dyeing solution is also taught therein. Thus, the invention lacks novelty.

Claims 1-8, 19-22 and 25-31 are rejected, under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,546,258).

The instant invention further recites octyl group for R<sup>6</sup> over Kalopissis et al who teach lower alkyls.

It would have been obvious to one skilled in the art at the time of invention to utilize one octyl group for a substituent in Kalopissis et al since said octyl group is considered being a lower alkyl and since the disclosure is not limited to a preferred alkyls absent showing otherwise.

Claims 1-5, 7-10, 12, 13, 19-22 and 25-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,442,599).

Kalopissis et al teach that the instant anthraquinone compound and its use in dyeing keratinic fibers at col. 1, line 21 to col. 2, line 57, and said keratinic fibers meet the instant textile. Use of a wetting agent in an aqueous dyeing solution is also taught therein. Thus, the invention lacks novelty.

Claims 1-13, 19-22 and 25-31 are rejected under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,442,599).

The instant invention further recites octyl group for R<sup>6</sup> over Kalopissis et al who teach lower alkyls.

It would have been obvious to one skilled in the art at the time of invention to utilize one octyl group for a substituent in Kalopissis et al since said octyl group is considered being a lower alkyl and since the disclosure is not limited to a preferred alkyls absent showing otherwise.

Claims 1-22 and 25-31 are rejected under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,442,599) in view of Kalopissis et al (US 3,531,502), Gutswiller (US 2,494,240) and Dickey et al (US 2,372,663).

The instant invention further recites difunctional quaternary ammonium salts over over Kalopissis et al (US'599) who teach monofunctional quaternary ammonium salt. However, difunctional substituents on an anthraquinone dye in order to improve a property of said substituents are well known as taught by Kalopissis et al (abstract), Gutswiller (claims) and Dickey et al (example 1).

It would have been obvious to one skilled in the art at the time of invention to obtain anthraquinone dye having difunctional quaternary ammonium salts in Kalopissis et al (US'599) with teaching of Kalopissis et al, Gutswiller and Dickey et al since difunctional substituents on an anthraquinone dye in order to improve a property of said substituents are well known absent showing otherwise.

Claims 1-13 and 19-33 are rejected under 35 U.S.C. 103(a) as obvious over Kalopissis et al (US 3,442,599) in view of Heslop (US 3,631,041), Leach (US 3,616,473), Jenny (US 2,918,344) and Tucker (US 2,890,094).

The instant invention further recites polymers or textiles thereof over Kalopissis et al who teach dyeing keratinic fibers.

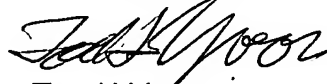
Tucker teach use of anthraquinone dyes in dyeing keratinic fibers as well as polymers such as nylon at col. 1, lines 30-33. Heslop, Leach and Jenny teach dyeing polymers with dyes in examples.

It would have been obvious to one skilled in the art at the time of invention to dye polymers or textiles thereof in Kalopissis et al (\*US'599) with teaching of Heslop, Leach, Jenny and Tucker since dyeing of materials whether they are natural or synthetic materials or not with a dye is a *prima facie* obviousness absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tae H Yoon  
Primary Examiner  
Art Unit 1714

THY/January 4, 2007